

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number  
**WO 2005/091209 A3**

(51) International Patent Classification:  
*G06K 9/00 (2006.01)*

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW.

(21) International Application Number:  
PCT/IB2005/050894

(22) International Filing Date: 14 March 2005 (14.03.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/553,752 16 March 2004 (16.03.2004) US

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(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report*

(88) Date of publication of the international search report:  
14 June 2007

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PRESSURE MAP BASED FINGERPRINT AUTHENTICATION METHOD AND SYSTEM

(57) Abstract: A fingerprint system (80) implements a fingerprint authentication method (20, 60) for a user fingerprint image (UFI) based on a plurality of control fingerprint images (CFI). The method involves a transformation of each control fingerprint image (CFI) into a transformed control fingerprint image (TCFI) as a function of a pressure map (PM) associated with the user fingerprint image (UFI), a matching of each transformed control fingerprint image (TCFI) to the user fingerprint image (UFI), and an authentication of the transformed control fingerprint image (TCFI) having a best match with the user fingerprint image (UFI) as an identified fingerprint image (IFI).

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## INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2005/050894

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06K9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JAIN A K ET AL: "An identity-authentication system using fingerprints" PROCEEDINGS OF THE IEEE, IEEE, NEW YORK, US, vol. 85, no. 9, September 1997 (1997-09), pages 1365-1388, XP002261867 ISSN: 0018-9219 cited in the application page 1369 - page 1373 page 1378 - page 1379 ----- -/-	1-21

Further documents are listed in the continuation of box O.

Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search

25 May 2005

Date of mailing of the international search report

03/06/2005

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## INTERNATIONAL SEARCH REPORT

International Application No PCT/IB2005/050894
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>ANIL JAIN ET AL: "Fingerprint matching using minutiae and texture features"      PROCEEDINGS 2001 INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. ICIP 2001.      THESSALONIKI, GREECE, OCT. 7 - 10, 2001,      INTERNATIONAL CONFERENCE ON IMAGE PROCESSING, NEW YORK, NY : IEEE, US,      vol. VOL. 1 OF 3. CONF. 8,      7 October 2001 (2001-10-07), pages      282-285, XP010563338      ISBN: 0-7803-6725-1      Section 2. Background, last paragraph      Section 3.1 Image Alignment      Section 3.4 Matching</p> <p>-----</p> <p>BOVIK, AL (EDITOR); JAIN, ANIL K.      (AUTHOR): "Handbook of Image and Video Processing, Section 10.5 Fingerprint Classification and Matching"      2000, ACADEMIC PRESS , SAN DIEGO, US      275840 , XP002328913      ISBN: 0-12-119790-5      cited in the application      pages 825-826      pages 831-833</p> <p>-----</p> <p>US 6 185 318 B1 (JAIN ANIL K ET AL)      6 February 2001 (2001-02-06)      cited in the application      abstract; figures 6,7,9,17</p> <p>-----</p> <p>SHIGEMATSU S ET AL: "A SINGLE-CHIP FINGERPRINT SENSOR AND IDENTIFIER"      IEEE JOURNAL OF SOLID-STATE CIRCUITS, IEEE INC. NEW YORK, US,      vol. 34, no. 12, December 1999 (1999-12),      pages 1852-1859, XP001149326      ISSN: 0018-9200      Section II.C. Fingerprint Identification      Section III. Identifying Pixel      abstract</p> <p>-----</p> <p>US 6 578 436 B1 (GANAPATHI SRINAVASAN K ET AL) 17 June 2003 (2003-06-17)      cited in the application      abstract</p> <p>-----</p>	1-21
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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No.

PCT/IB2005/050894

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